PIPEFITTER LEADER WL-4204-10

METAL TRADES

DOCUMENT NAME/#: TMP00070

COREDOC

I. POSITION AND ORGANIZATION INFORMATION

Position:

Leader

Pipefitter, W6-4204-10

Purpose of position:

The primary purpose of this job is to install, modify, troubleshoot, maintain, and repair industrial or domestic high-temperature water and high-pressure piping systems and equipment.

Organization:

Facilities Mgmt Div., Maintenance Branch

Organization goals:

II. MAJOR DUTIES

A. Duty (Non-Critical):

Serves as crew leader of the Metal Trades staff providing a wide range of leadership over other trades workers at the journeman and worker levels. (10%)

Tasks:

- 1. Passing on to other workers the instructions received from supervisors and getting work started, e.g., by assigning the immediate tasks to be performed by individual member of the group led;
- 2. Working along with other workers and setting the pace;
- 3. Demonstrating proper work methods;
- 4. Ensure needing plans, blueprints, materials, and tools are available, and that needed stock is obtained from supply locations;
- 5. Obtaining needed information or decisions from supervisors on problems that come up during the work;
- 6. Maintaining current knowledge, and answering questions of other workers on procedures, policies, written instructions, and other directives (e.g. technical orders);
- 7. Ensuring that there is enough work to keep everyone in the work crew busy;
- 8. Checking work while in progress and when finished to see whether the supervisor's instructions on work sequence, procedures, methods, and deadlines have been met;
- 9. Urging or advising others workers to follow instructions received from supervisors, and to meet deadlines;
- Assuring that safety and housekeeping rules are followed;

- 11. Reporting to the supervisors on status and progress of work and causes of work delays; and
- 12. Answering questions of supervisors on overall work operations and problems.

Selected Staffing KSAs:

Ability to LEAS & Work Crew

B. Duty (Critical):

Installs, modifies, and repairs new and existing high-pressure piping systems and equipment such as steam heating, steam generation, and hydraulic systems, steam generators, flash and expansion tanks, condensate, vacuum, and circulating pumps, and radiators. Measures and determines proper piping, valves, and fittings required for the job; insulates pipes; and measures required cuts, threads, reams, etc. Cuts route openings; places hangers for correct pitch and elevation; and installs braces and supports. Maintains records and documents actions. (20%)

Tasks:

- 1. Installs and maintains assigned systems and equipment and makes appropriate repairs and modifications as needed.
- 2. Ensures products meet accepted trade standards and practices.
- 3. Prepares records of actions taken and assures documentation is signed and coordinated.

Selected Staffing KSAs:

A1, A2, A3, A4, A5, A6, A7, A8

C. Duty (Critical):

Plans and lays out installation, repair, and/or modification of high pressure piping systems and equipment applying and interpreting information in blueprints, charts, and sketches. Determines system routing, placement, pitch, elevation, and operation and calculates pipe, joint, and valve sizes needed to support system pressures(s). (20%)

Tasks:

- 1. Develops plans in a manner which promotes both effectiveness and efficiency.
- 2. Determines the need for modifications and repairs.
- 3. Calculations for plans are consistently accurate.

Selected Staffing KSAs:

A1, A2, A3, A4, A5, A6, A7, A8

D. Duty (Critical):

Troubleshoots/inspects high-pressure piping systems and equipment and determines need for modification and/or repair to insure proper and safe operation. (20%)

Tasks:

- 1. Conducts inspections of and troubleshoots piping systems, identifying irregularities and existing and/or potential problems.
- 2. Identifies source and nature of system malfunctions. Uses diagnostic techniques, e.g., tracing steam, to locate problem.

Selected Staffing KSAs:

A1, A2, A3, A4, A5, A6, A7, A8

E. Duty (Critical):

Utilizes safety practices and procedures following established safety rules and regulations and maintains safe and clean work environment. (10%)

Tasks:

- 1. Operates equipment in a safe manner, applying established safety rules and regulations to minimize minor violations and to avoid major violations due to employee error or negligence.
- 2. Informs the supervisor of accidents and/or damage to supplies or equipment or of any observed unsafe practices and/or procedures in a timely manner in accordance with established policies and procedures.

Selected Staffing KSAs:

A1, A2, A3, A4, A5, A6

F. Duty (Critical):

Uses and maintains tools. (20%)

Tasks:

1. Uses, maintains, and accounts for all types of hand and power tools such as wrenches, pipe threaders, cutters, dividers, chalk lines, drills, grinders, and ground fault interrupter equipment, as required, to accomplish assigned duties.

Selected Staffing KSAs:

A1, A2, A3, A5, A6

G. Other Work Requirements

1. This position requires the employee to drive a motor vehicle. An appropriate, valid driver's license is required for the position.

III. KNOWLEDGES, SKILLS AND ABILITIES (KSAs)

A. Selected Staffing KSAs:

- 1. Knowledge of high-pressure piping systems and equipment such as, steam heating, steam generation, and hydraulic systems, steam generators, flash and expansion tanks, condensate, vacuum, and circulating pumps, and radiators.
- 2. Knowledge of technical practices in order to determine need for modifications and repairs.
- 3. Knowledge of safety practices and procedures.

- 4. Skill in troubleshooting/inspecting piping systems to identify irregularities and existing and/or potential problems and system malfunctions.
- 5. Skill in using and maintaining hand and power tools such as, wrenches, pipe threaders, cutters, dividers, chalk lines, drills, grinders, and ground fault interrupter equipment.
- 6. Ability to install, modify, troubleshoot, maintain, and repair industrial or domestic high-temperature water and high-pressure piping systems and equipment without more than normal supervision.
- 7. Ability to interpret information in blueprints, charts, and sketches to plan and lay out installation, repair, and/or modification of high pressure piping systems and equipment.
- 8. Ability to interpret instructions, specifications, etc. (including blueprint reading).

B. Basic Training Competencies:

- 1. Knowledge of high-pressure piping systems and equipment such as, steam heating, steam generation, and hydraulic systems, steam generators, flash and expansion tanks, condensate, vacuum, and circulating pumps, and radiators.
- 2. Knowledge of technical practices in order to determine need for modifications and repairs.
- 3. Knowledge of safety practices and procedures.
- 4. Skill in troubleshooting/inspecting piping systems to identify irregularities and existing and/or potential problems and system malfunctions.
- 5. Skill in using and maintaining hand and power tools such as, wrenches, pipe threaders, cutters, dividers, chalk lines, drills, grinders, and ground fault interrupter equipment.
- 6. Ability to install, modify, troubleshoot, maintain, and repair industrial or domestic high-temperature water and high-pressure piping systems and equipment without more than normal supervision.
- 7. Ability to interpret information in blueprints, charts, and sketches to plan and lay out installation, repair, and/or modification of high pressure piping systems and equipment.
- 8. Ability to interpret instructions, specifications, etc. (including blueprint reading).

IV. CLASSIFICATION FACTORS

Factor 1. Knowledge

- 1. Ability to Lead a work crew
- 2. -- Knowledge of how various high-pressure piping systems and equipment such as steam heating, steam generation, and vacuum systems, radiators, and circulating pumps, are installed and operate. For example, the incumbent must know how relief valves, check valves, pressure regulators, expansion joints, and other pressure supporting and controlling devices are installed and how they operate to control increases and decreases in pressure, flow, circulation, and expansion in the systems.

-- Ability to plan and lay out the installation, modification, and repair of various new and existing piping systems and equipment. For example, the pipefitter must be able to lay out and install various kinds of piping, risers, and flexible branches at the proper level and incline; determine the placement and elevation and install steam generators, vacuum and condensate pumps, and radiators; and replace heat exchangers, flash and expansion tanks, and automatic and manual control valves.

- -- Ability to interpret and apply building plans and blueprints, and to use shop mathematics to lay out angles, arcs, and circles.
- -- Skill in any of the accepted trade methods and techniques, for example, figuring pipe, joint, and valve sizes needed to support pressures of systems, aligning pipes, valves, fittings, and joints for accurate match, and installing proper braces and supports to control movement and vibration and allow for expansion and contraction.
- -- Skill in the use of tools and equipment such as sliding squares, measuring tapes, dividers, chalk lines, plumb bobs, templates, star drills, grinders, flangers, hand and power pipe threaders and cutters, and pipe wrenches.

Factor 2. Responsibility

The pipefitter receives assignments orally and works through work orders, building plans, and blueprints. Independently plans and lays out the routing, placement, pitch, incline, and elevation of systems and equipment; figures pressures in systems and sees that the piping, valves, fittings, and equipment are proper for the work. Installations, modifications, and repairs are completed with little or no check during their progress or upon completion. Tests systems and equipment after completing work for proper circulation, flow, pressure, and leak-free joints. Overall work is checked by the supervisor to see that it meets accepted trade standards.

Factor 3. Physical Effort

Employee makes repairs and installations from ladders, scaffolding, platforms, and other hard-to-reach places. Must stand, stoop, bend, kneel, climb, stretch, and work in tiring and uncomfortable positions. Frequently lifts parts and equipment that weigh up to 50 pounds. Occasionally lifts items that weigh over 50 pounds with assistance from other workers.

Factor 4. Working Conditions

The work is done inside and outside, and is usually dirty, dusty, and greasy The pipefitter is sometimes required to make installations and repairs in areas where bad smelling fumes are present. There is frequent exposure to the possibility of uncomfortable heat conditions. The pipefitter is frequently exposed to the possibility of strains, cuts, scrapes, bruises, burns, and infections. The incumbent is occasionally exposed to the possibility of broken bones. Employee uses and maintains prescribed safety/protective clothing and equipment such as the following: hard hat, safety glasses, shoes, belts, face shields, respirators, gas masks, ear protection devices, gloves, coveralls, and foul weather gear.

٧.

CLASSIFICATION SUMMARY

In this position:

One or more duties in this position are based on series data from a different pay plan than the pay plan which is predominant for the position and have not been evaluated. If these duties constitute more than 25% of the position's time, you may want to consult with a classification specialist to determine if there is any impact on the appropriate pay

Duty A. 10% -User defined duty. Not classified by system. The final grade may or may not be appropriate.
Lead Duties

- Duty B. 20% WG-4204-10 Pipefitter Installs Piping Systems
- Duty C. 20% WG-4204-10 Pipefitter Plans Installation
- Duty D. 20% WG-4204-10 Pipefitter
 Troubleshoots Piping Systems
- Duty E. 10% WG-4204-10 Pipefitter Utilizes Safety Practices
- Duty F. 20% WG-4204-10 Pipefitter
 Uses and Maintains Tools

Knowledge 1. user defined, has been linked to duty A.

List of Modified Duties and Factors:

Duty A. has been added. Knowledge 1 has been added.

OPM Job Grading Standard for Pipefitter, WG-4204, TS-6 dated March 1969.

Grade: WG-10

VI. CLASSIFICATION REMARKS:

Job Grading Standard for Leader WL/NL (TS-39 dtd Jan 1980 FPM Supplement 512-1) part 1 for Working Leader was applied to duty A. The position leads a crew of 12 employees of a wide variety of trades. Four WG-10 (machinist, pipefitter, welder & sheet metal mechanic) constitute the highest grades led by this position. Consequently, the position is graded at the WL-10 level.